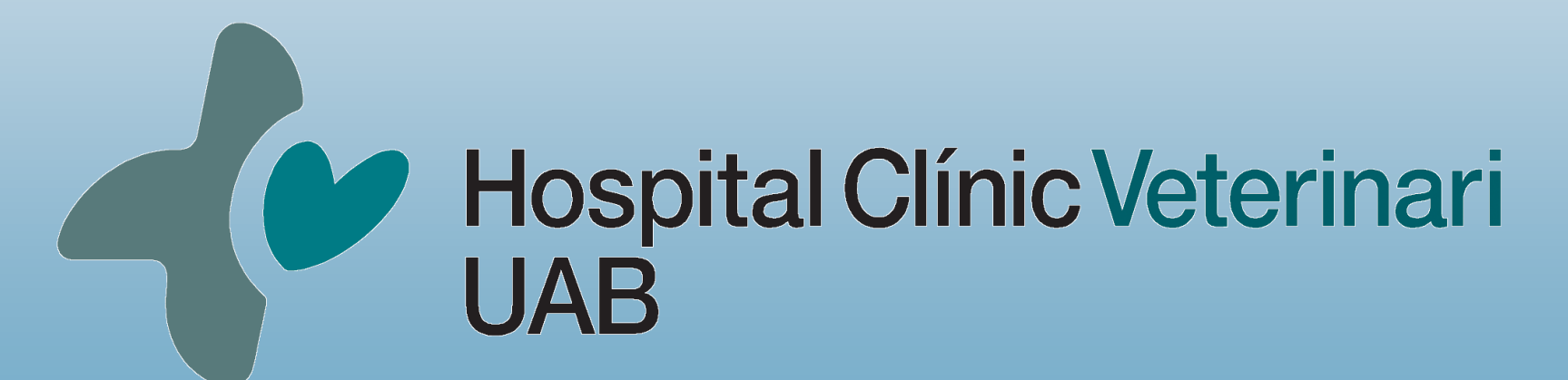


# EAR SURGERY (EXTERNAL EAR CANAL AND TYMPANIC BULLA) IN DOGS AND CATS: BIBLIOGRAPHIC REVIEW AND CLINICAL CASES REVIEW (2003-2017)



Universitat Autònoma de Barcelona

Oltra Preixens, Laia  
Veterinary Medicine School  
June 2017



## INTRODUCCTION

Diseases of the ear in dogs and cats are very common. Different surgical techniques of the ear canal and bulla are indicated for the resolution of those problems where otic medical treatments have failed. The surgical technique used will be based on Computerized Tomography. This type of surgery is associated to a high rate of complications and consequently the experience and anatomic knowledge of the surgeon are of vital importance. The aim of this study was to perform a bibliographic review of auricular surgery and describe clinical data of a case series from the Hospital Clínic Veterinari-UAB.

## EAR DISEASES

	Otitis	Ear neoplasia
Canine	<ul style="list-style-type: none"><li>- More frequent.</li><li>- Bacterial OM (descending from OE).</li><li>- Stenotic OE.</li><li>- Cocker, Labrador Retriever, Poodle and Fox Terrier.</li></ul>	<ul style="list-style-type: none"><li>- Benign = Malign.</li><li>- Benign: papilloma, basalioma, ceruminous adenoma and sebaceous adenoma.</li><li>- Malign: ceruminous adenocarcinoma and squamous cell carcinoma.</li></ul>
Feline	<ul style="list-style-type: none"><li>- Bacterial OM(ascending respiratory infection)</li><li>- Bacterial OE and OM secondary to polyps.</li><li>- Himalayan and Persian.</li></ul>	<ul style="list-style-type: none"><li>- More frequent</li><li>- Malign &gt; Benign.</li><li>- Benign: ceruminous adenoma.</li><li>- Malign: ceruminous adenocarcinoma and squamous cell carcinoma.</li></ul>

Figure 1: Ear diseases in which ear surgery is indicated according to the species.

## SURGERY OF THE EAR

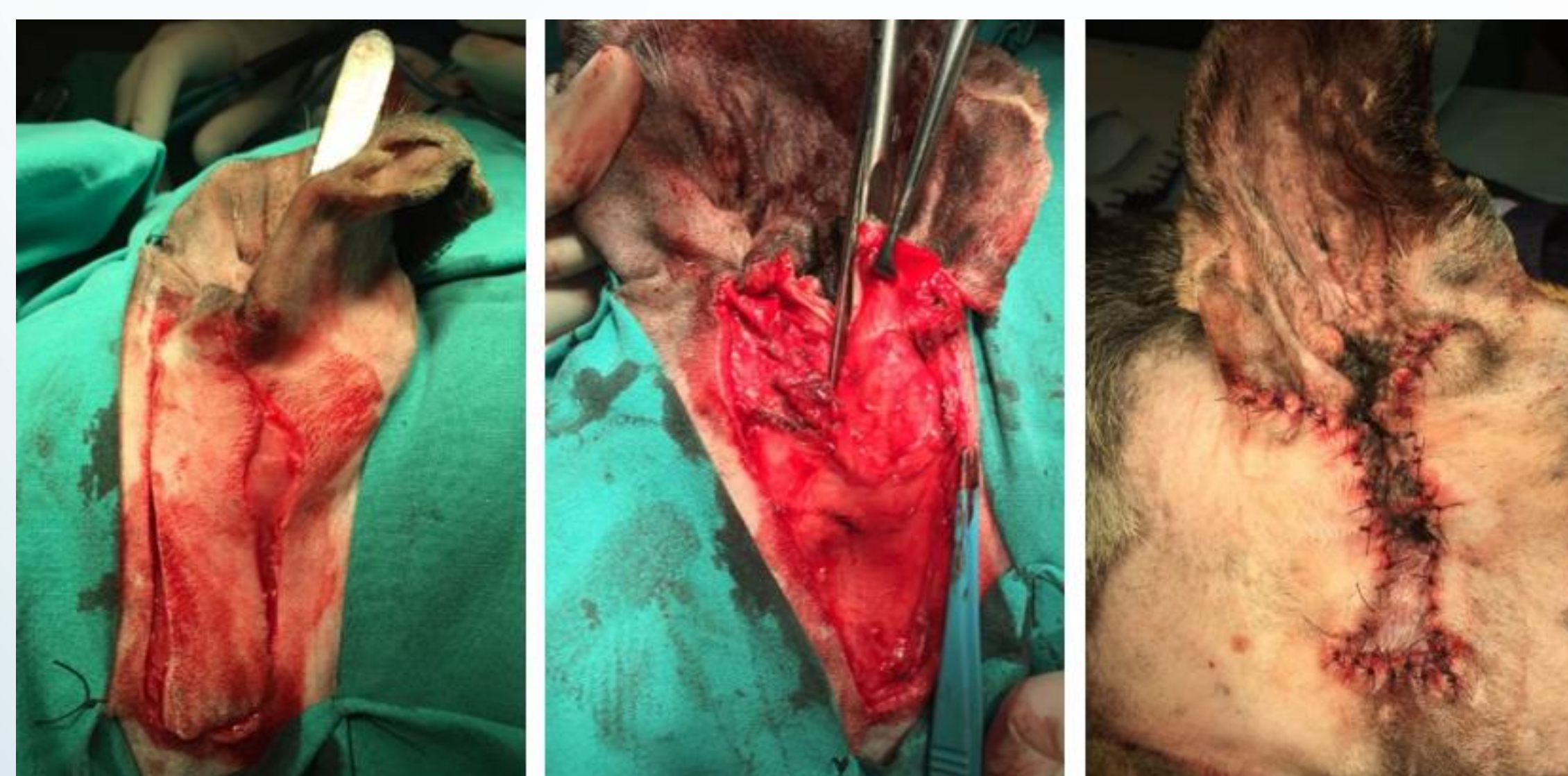


Figure 2: Zepp surgical procedure. (Photographs by L. Fresno)

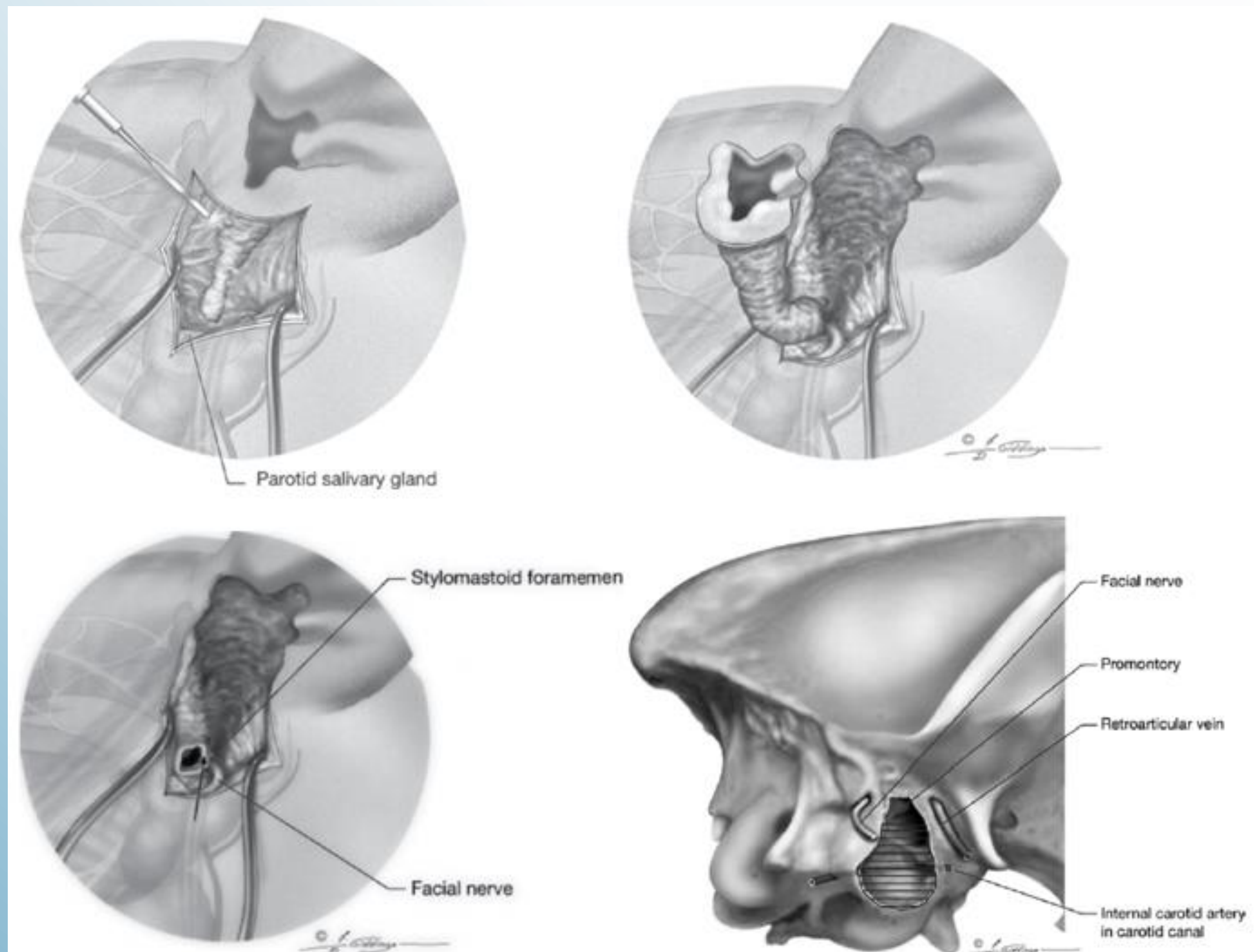


Figure 3: TECALBO surgical procedure. <sup>1</sup>

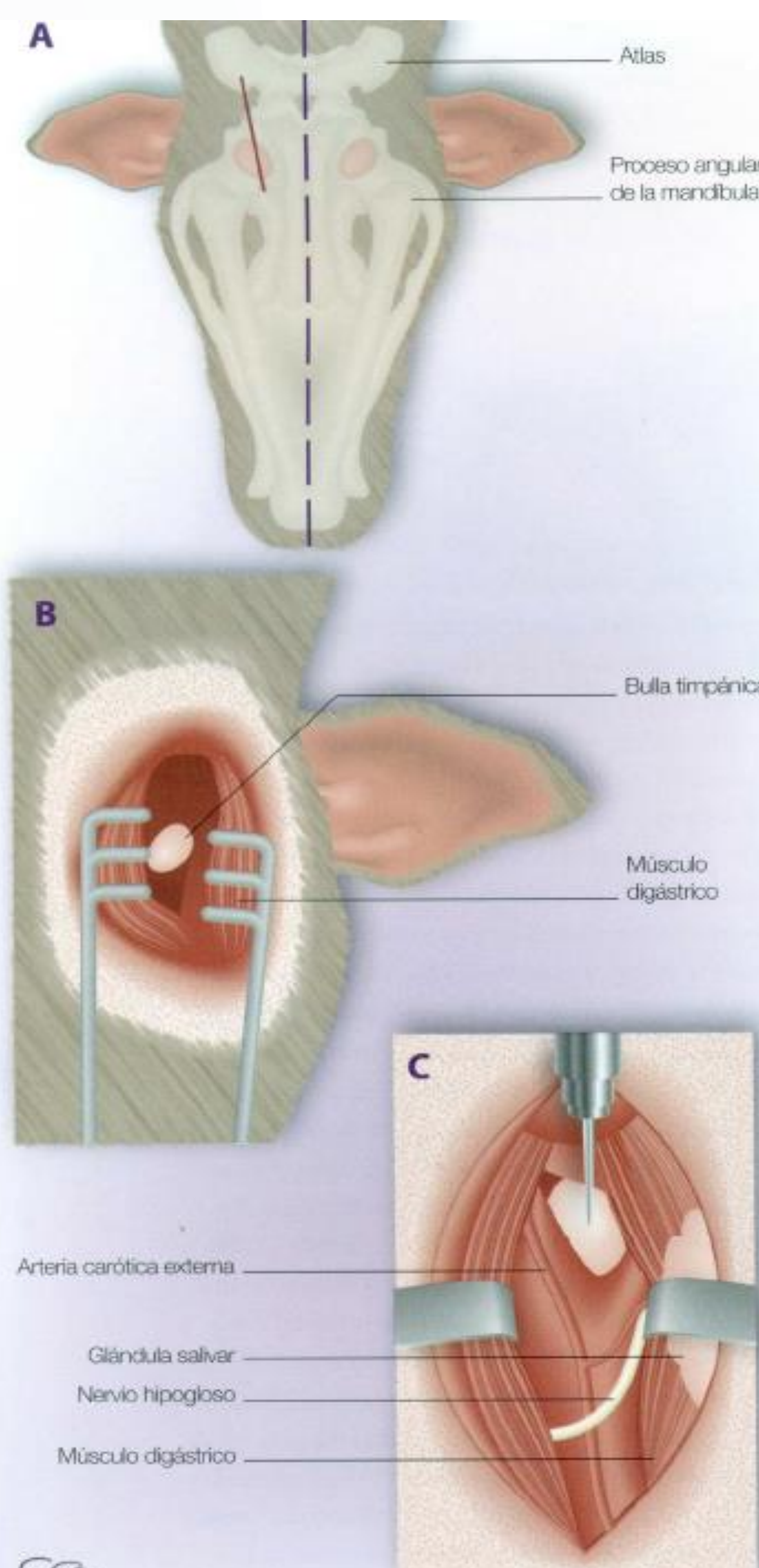


Figure 4: VBO surgical procedure. <sup>2</sup>

## CASES REVIEW

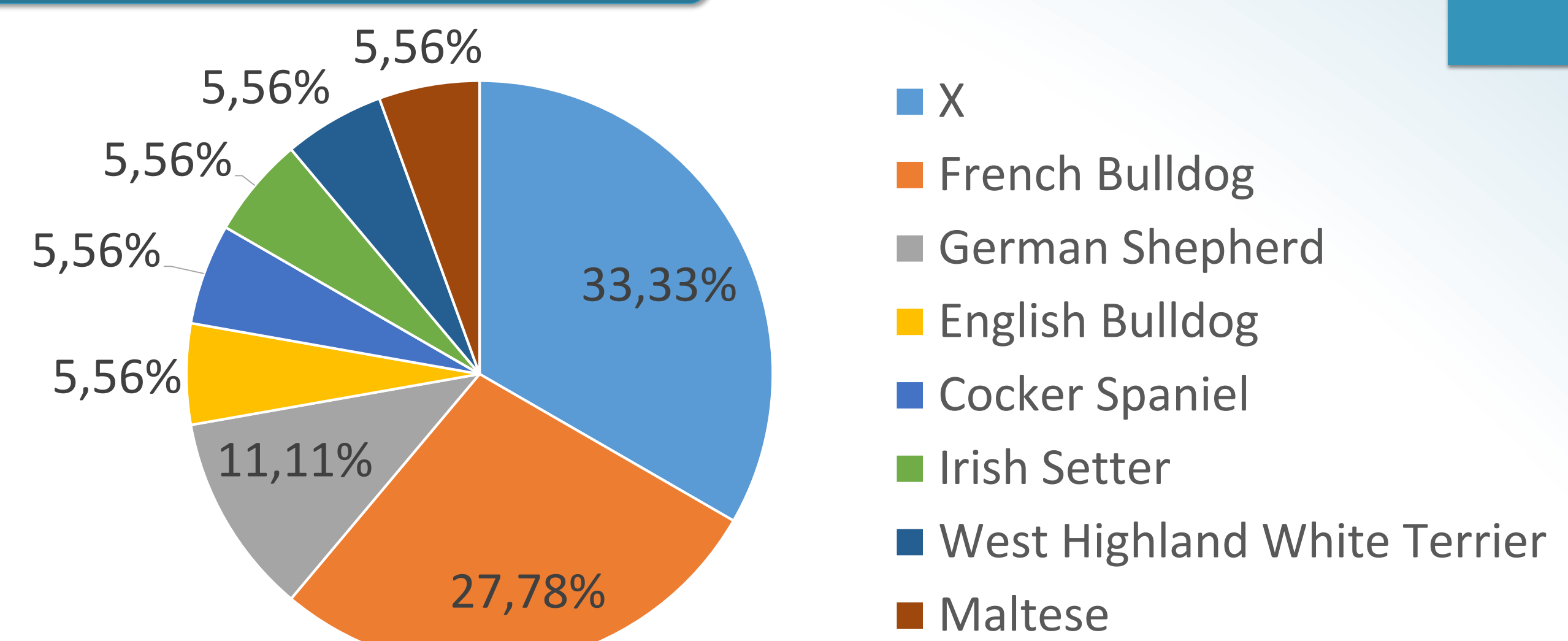


Figure 5: Breed analysis of patients undergoing ear surgery.

	Otitis externa	Otitis media	Otitis interna	Otitis	Neoplasia	Both otitis and neoplasia
Feline (n=6)	33,33 %	16,67 %	16,67 %	50,00 %	50,00 %	0,00%
Canine (n=18)	72,22 %	27,78 %	11,11 %	77,78 %	5,56 %	16,67%
Total animals (n=24)	62,50 %	25,00 %	12,50 %	70,83 %	16,67 %	12,50%

Figure 6: Analysis of the initial pathology presented by patients undergoing otic surgery.

	ZEPP (n=6)	TECALBO (n=17)	VBO (n=1)	TECA (n=5)
Facial nerve injury	16,67 %	52,94 %	0,00 %	40,00 %
Hypoglossal nerve injury	0,00 %	0,00 %	0,00 %	0,00 %
Trigeminal nerve injury	0,00 %	0,00 %	0,00 %	0,00 %
Significant hemorrhage	0,00 %	11,76 %	0,00 %	20,00 %
Parotid gland injury	0,00 %	0,00 %	0,00 %	0,00 %
Partial curettage tympanic cavity	0,00 %	5,88 %	0,00 %	0,00 %

Figure 7: Intra-surgical complications associated with different ear surgery techniques in the FHCV.

	ZEPP (n=6)	TECALBO (n=17)	VBO (n=1)	TECA (n=5)
Facial nerve deficits	16,67 %	58,82 %	0,00 %	40,00 %
- which reversible	100,00 %	70,00 %	0,00 %	50,00 %
Horner's syndrome	0,00 %	0,00 %	100,00 %	0,00 %
Head Tilt	0,00 %	23,53 %	0,00 %	0,00 %
Acute inflammation	16,67 %	5,88 %	0,00 %	0,00 %
Healing problems	16,67 %	0,00 %	0,00 %	20,00 %
Ulcerative keratitis	0,00 %	23,53 %	0,00 %	20,00 %
Abscessation/Fistula	0,00 %	0,00 %	0,00 %	20,00 %
Relapse	33,33 %	29,41 %	100,00 %	0,00 %

Figure 8: Post-surgical complications associated with different ear surgery techniques in the FHCV.

## CONCLUSIONS

- Ear diseases are very common in both canine and feline species.
- Ear surgery requires high experience of the surgeon and good anatomical knowledge.
- In the dog middle ear infections occur mainly descendants while in the cat middle ear infections occur ascendants.
- Ear neoplasms are more common in the feline species.
- Otic surgery is associated with a large amount of intra and post-surgical complications.
- The review of different cases from *Fundació Hospital Clínic Veterinari* has shown that over the 60% of dogs with ear disease that required surgical treatment were mongrel or French Bulldog.
- The most common complication, intra or post-surgical, found in the review is the facial nerve paralysis, which is reversible in most cases (over 50%).

## REFERENCES

1. Monnet E. 2012. Small animal soft tissue surgery. John Wiley & Sons.
2. Besignor E, Germain P-A. 2009. Enfermedades del oído en el perro y el gato. Zaragoza.